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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/763,289  
Filing Date: January 23, 2004  
Appellant(s): GAGE, KENNETH L.

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Kam Tam  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/17/2009 appealing from the Office action mailed 8/22/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2005/0080884	Siorpaes et al.	1-2003
2004/0028009	Dorenbosch et al.	8-2002

6,879,600	Jones et al.	8-2002
2002/0078187	Rawson, III	12-2000

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 5-10, 12-15, 19-23, and 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Siorpaes et al. (US 2005/0080884) (hereinafter Siorpaes).

Regarding claim 1, Siorpaes teaches a method for selecting a wireless device network communication link to a destination host through one of a plurality of available wireless protocol links (wireless communication standards), the method comprising:

selecting a first protocol link from the plurality of available wireless protocol links based on predetermined criteria; (paragraphs 59, 85; link availability test procedures)

establishing a first (TCP/IP) network connection through the first protocol link, wherein the wireless device has a designated IP address; (paragraph 67)

detecting a change in status of the predetermined criteria of the first protocol link; (paragraphs 60, 88)

selecting a second protocol link from the plurality of available wireless protocol links based on the change in status of the predetermined criteria; (paragraphs 70, 100)

establishing a second Transfer Control Protocol/Internet Protocol (TCP/IP) network connection through the second protocol link, using the designated IP address for the wireless device; and (paragraph 100)

terminating the first network connection through the first protocol link, such that the wireless device does not lose network communication with the destination host (paragraphs 67, 106, 107).

Regarding claim 2, Siorpaes teaches the predetermined criteria includes a link quality value (paragraph 88).

Regarding claim 3, Siorpaes teaches the link quality value is measured by a signal strength of the protocol link (paragraph 88).

Regarding claim 5, Siorpaes teaches selecting a first protocol link includes communicating with a first service provider adapted to provide and maintain the first protocol link (paragraphs 134).

Regarding claim 6, Siorpaes teaches selecting a first protocol link includes communicating with a first base unit providing network communication using the first protocol link (figure 2, APs).

Regarding claim 7, Siorpaes teaches establishing a first network connection includes assigning a first network address to the first base unit (paragraph 129).

Regarding claim 8, Siorpaes teaches establishing a first network connection includes assigning a second network address to the wireless device (paragraph 106).

Regarding claim 9, Siorpaes teaches establishing a first network connection includes mapping the second network address to the first network address so that data can be routed to the wireless device through the first base unit (paragraph 100).

Regarding claim 10, Siorpaes teaches the change in status or condition of the first protocol link with respect to the predetermined criteria includes a situation where

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signal strength of the first protocol link falls below signal strength of the second protocol link (paragraph 88).

Regarding claim 12, Siorpaes teaches selecting a second protocol link includes communicating with a second base unit providing the second protocol link (figure 2).

Regarding claim 13, Siorpaes teaches establishing a second network connection includes assigning a third network address to the second base unit (paragraph 142).

Regarding claim 14, Siorpaes teaches establishing a second network connection includes assigning a second network address to the wireless device, wherein the second network address is the designated IP address for the wireless device (paragraph 143).

Regarding claim 15, Siorpaes teaches establishing a second network connection includes mapping the second network address to the third network address so that data can be re-routed to the wireless device through the second base unit (paragraphs 142-146).

Regarding claims 19, 27, and 30, the limitations are rejected as applied to claim 1.

Regarding claim 20, Siorpaes teaches a plurality of service providers corresponding to the plurality of wireless protocol base units, wherein the service providers enable wireless network connection to the wireless communication device through the wireless protocol base units (figure 2).

Regarding claim 21, Siorpaes teaches the wireless communication device includes a health monitor for monitoring health of the plurality of wireless protocol links (paragraphs 85-88).

Regarding claim 22, Siorpaes teaches the wireless communication device includes a mobile connection logic for generating a list of prioritized wireless protocol links for replacement of the first wireless protocol link (paragraph 88).

Regarding claim 23, Siorpaes teaches the available protocol links include wireless protocol links with signal strengths above a predetermined level (paragraph 88).

Regarding claim 28, Siorpaes teaches a first memory configured to store data comprising parameters related to the first wireless protocol link (paragraph 88, routing manager).

Regarding claim 29, Siorpaes teaches the mobile connection logic includes:  
a second memory configured to store data comprising parameters related to the second wireless protocol link, such that parameters stored in the second memory are transferred to the first memory when the mobile connection logic determines that the second protocol link is established and verified to be properly operating (paragraph 88, routing manager).

Claims 16-18, 24-26, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siorpaes et al. (US 2005/0080884) (hereinafter Siorpaes) in view of Dorenbosch et al. (US 2004/0028009) (hereinafter Dorenbosch).

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Regarding claims 16-18, 25, 31, and 32, Siorpaes teaches the limitations set forth in claims 1, 19, and 30, but does not explicitly disclose generating a mapping table for mapping the wireless device to the first protocol, updating the mapping table to map the wireless device to the second protocol, and using a network address translation (NAT) table to route data to/from the wireless device from/to a network site. Dorenbosch discloses a method and apparatus for effecting a seamless handoff between IP connections (title). In the scope of the invention, a gateway provides Network Access Translation of an IP address between a cellular and WLAN network (pages 3, 4, paragraphs 26-28). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the gateway of Siorpaes to include Network Access Translation, as taught by Dorenbosch, in order to substitute address values for application specific data and provide handoff from one IP connection to another.

Regarding claim 24, Dorenbosch teaches a mapping table configured to map wireless protocol links to the wireless communication device.

Regarding claim 26, Dorenbosch teaches that streams are encapsulated with IP address associated with the mobile station (page 4, paragraphs 27, 28).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siorpaes et al. (US 2005/0080884) (hereinafter Siorpaes) in view of Jones (US 6,879,600).

Siorpaes teaches the limitations set forth in claim 1, but does not explicitly teach that the predetermined criteria includes a connection fee charged by a service provider



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of the protocol link. Jones teaches mobile arbitration wherein policies for selecting access networks includes lowest relative cost (column 12, lines 6-21). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Siorpaes to include service provider fees or cost in selecting a wireless protocol, as taught by Jones, in order to allow subscribers to benefit from reduces service costs.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siorpaes et al. (US 2005/0080884) (hereinafter Siorpaes) in view of Rawson, III (US 20020078187) (hereinafter Rawson).

Siorpaes teaches the limitations set forth in claim 1, but does not explicitly teach selecting a protocol link and establish a second network connection are performed within a predetermined amount of time allotted for a "liveness" check so that a transition between the first network connection and the second network connection is transparent to the wireless device. Rawson teaches a simple liveness protocol wherein a server determines the liveness with a time period of each target individually (paragraph 49). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Siorpaes, to include a liveness check, as taught by Rawson, in order to determine whether the target is live before switching protocols.

**(10) Response to Argument**

A. Appellant asserts that the Siorpaes reference as applied fails to explicitly or inherently teach establishing a second TCP/IP network connection through a second protocol link as recited in independent claim 1.

In response to Appellant assertion the Examiner submits that Siorpaes does teach "establishing a second Transfer Control Protocol/Internet Protocol (TCP/IP) network connection through the second protocol link. In the invention of Siorpaes, a mobile terminal (MT) may switch or handover between different technologies or protocols according to parameters such as link quality and availability (paragraphs 84, 88, 56, 57). A switch between different technologies is interpreted by the Examiner as a switch from a "first protocol link" to a "second protocol link". Siorpaes teaches that during initial access to the server, the server assigns the MT an IP address referred to as "IP\_CLIENT" that never changes during roaming or switching between two different networks (paragraphs 129, 110). This IP address is interpreted by the Examiner as the IP address designated to the MT when a "first protocol link" is established. Siorpaes teaches the steps executed when a vertical handoff occurs, or switching between a "first protocol link" to a second "protocol link" in paragraphs 136-146. As can be seen in paragraphs 139 and 143, the MT is assigned a different IP\_BEARER address referred to as "IP\_BEARER\_2", but there is no reconfiguration or reassignment of the "IP\_CLIENT" address. This IP address assigned to the MT remains constant which is further taught in paragraphs 134 and 113. Therefore the MT is assigned an IP\_CLIENT address by the server when the "first protocol link" is established and when subnet

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switching occurs, or a "second protocol link" is established and the IP\_CLIENT address remains unchanged thus teaching the subject claim limitations.

Additionally, the Examiner interprets a "protocol link" as a method and specification for transmission of data from one node to another node on the same link. The claim merely recites a "first protocol link" and a "second protocol link". The broad scope of the claim language does not necessitate different wireless protocol technology as asserted by Appellant. Alternatively, the "first protocol link" and the "second protocol link" may be interpreted as two different links that operate under a protocol, regardless of whether the protocol is the same or different because there is no distinction in the claim language. Using the interpretation that the protocol links operate in the same protocol, the subject claim limitation can also be rendered by the homogeneous roaming taught by Siorpaes wherein the mobile terminal roams between access points of the same IP subnet (paragraph 96). In this scenario when the mobile terminal currently connected to an access point (first link operating under a protocol) roams to another access point (second link operating under a protocol), the limitation recited "establishing a second TCP/IP network connection through a second protocol link" is rendered.

B. Appellant asserts that the Siorpaes reference as applied fails to explicitly or inherently teach mapping of network addresses to replace a first wireless protocol link with another protocol link from a group of available protocol links as recited in independent claim 19.

In response to Appellant's assertion, Siorpaes teaches server side classes in particular ApplicationServer, the TunnelEndPoint, and the AAAServer wherein the

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AAAServer assigns IP addresses that can be used by mobile clients throughout a session (paragraph 115). After initial access with the server (paragraphs 121-133), when handover or roaming is required the server would assign the appropriate IP addresses for the mobile terminal to use whether the mobile terminal is handing over between access points of the same IP subnet (paragraph 96) or handing over between two technologies (paragraph 135-146). As defined by the claim language, "mapping" is the replacement of a first protocol link with another protocol link. Thus when the mobile terminal conducts a handover, a first protocol link would be "mapped" or replaced by another protocol link in both instances of roaming between access points of the same IP subnet or roaming to another technology.

C. Appellant asserts that the Siorpaes reference as applied fails to explicitly or inherently teach a first wireless protocol link that can be replaced with a second protocol link from a group of available protocol links when a status of the first wireless protocol link changes as recited in independent claim 27.

In response to Appellant's assertion, Siorpaes further teaches that handover is necessary when the mobile terminal enters an area that provides a more convenient technology in terms of cost, bandwidth, power requirements, or when the technology that is being used is no longer available (paragraph 84). Any of these conditions or parameters would render the "status of the first wireless protocol link" because they define a state or situation of the link which would require the mobile terminal to handover. The subject limitations are taught because when any of the above conditions are met indicating that a handover is required, the mobile terminal would conduct a

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handover wherein a first protocol link would be "mapped" or replaced by another protocol link in both instances of roaming between access points of the same IP subnet or roaming to another technology.

D. Appellant asserts that the Siorpaes reference as applied fails to explicitly or inherently teach a first wireless protocol link that can be replaced with a second protocol link from a group of available protocol links when a status of the first wireless protocol link changes as recited in independent claim 30.

In response to Appellant's assertion, Siorpaes further teaches that handover is necessary when the mobile terminal enters an area that provides a more convenient technology in terms of cost, bandwidth, power requirements, or when the technology that is being used is no longer available (paragraph 84). Any of these conditions or parameters would render the "status of the first wireless protocol link" because they define a state or situation of the link which would require the mobile terminal to handover. The subject limitations are taught because when any of the above conditions are met indicating that a handover is required, the mobile terminal would conduct a handover wherein a first protocol link would be "mapped" or replaced by another protocol link in both instances of roaming between access points of the same IP subnet or roaming to another technology.

E. Appellant asserts that the rejection of claim 19 is improper for failing to address each and every element claimed.

In response to Appellant's assertion, the Examiner agrees that there is no mention of a Control Center or mapping of network addresses in claim 1, but asserts

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that these limitations are taught by Siorpaes. Siorapes teaches server side classes in particular ApplicationServer, the TunnelEndPoint, and the AAAServer wherein the AAAServer assigns IP addresses that can be used by mobile clients throughout a session (paragraph 115). After initial access with the server (paragraphs 121-133), when handover or roaming is required the server would assign the appropriate IP addresses for the mobile terminal to use whether the mobile terminal is handing over between access points of the same IP subnet (paragraph 96) or handing over between two technologies (paragraph 135-146). As defined by the claim language, "mapping" is the replacement of a first protocol link with another protocol link. Thus when the mobile terminal conducts a handover, a first protocol link would be "mapped" or replaced by another protocol link in both instances of roaming between access points of the same IP subnet or roaming to another technology. Therefore the server of Siorpaes would render the "Control Center" because it performs "mapping of network addresses" by replacing protocol links during handover.

In response to Appellant failing to see how Siorapes can teach mapping network addresses without generating a mapping table, the teaching of a "mapping table" is taught by Dorenbosch. Dorenbosch teaches that a gateway provides Network Access Translation of an IP address between a cellular and WAN network (paragraphs 26-28). The Network Access Translation performed by the gateway renders the "mapping table" because it performs the same function of translating, or replacing, IP addresses between different networks or protocols.

F. Appellant asserts the references Siorpaes and Dorenbosch are not properly combinable under 35 U.S.C. § 103(a).

In response to Appellant's assertion, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Dorenbosch was cited explicitly to teach the use of a network address translation of an IP address between two different networks. The motivation as stated in the Final Rejection filed on 8/22/08 is to modify the server of Siorpaes to include network address translation in order to substitute address values for application specific data and provide handoff from one IP connection to another. One of ordinary skill in the art would recognize that this feature would be advantageous to the server of Siorpaes because of the capability to operate in various networks or protocols.

G. Appellant asserts that dependent Claims 2-3, 5-10, 12-15, 20-23, and 28-29, which all depend either directly or indirectly from independent claims 1, 19, and 27, are patentable for at least the same reasons as the independent claims from which they depend. Based on the arguments applied to the independent claims above, these claims are not patentable.

H. Appellant asserts that dependent Claims 16-18, 24-26 and 31-32 that dependent claims 16-18, 24-26 and 31-32, which depend variously from independent

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claims 1, 19, and 30, are patentable for at least the same reasons. Based on the arguments applied to the independent claims above, these claims are not patentable.

I. Appellant asserts that dependent claim 4, which depends from independent claim 1, is patentable for at least the same reasons. Based on the arguments applied to the independent claims above, these claims are not patentable.

J. Appellant asserts that dependent claim 11, which depends from independent claim 1, is patentable for at least the same reasons. Based on the arguments applied to the independent claims above, these claims are not patentable.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Nam Huynh/

Examiner, Art Unit 2617

Conferees:

/George Eng/

Supervisory Patent Examiner, Art Unit 2617

/Duc Nguyen/



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